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ABSTRACT

Information about the Delaware Educational Assessment Program and the performance of Delaware public school students during 1986-87 as measured by a nationally-normed standardized achievement test are presented. The presentation is designed for use by the educational community and the general public. Program features include: (1) statewide standardized testing in grades 1 through 8 and 11 in reading, English, and mathematics; (2) supplemental testing in science and social studies for 11th graders; (3) reporting of individual achievement progress to parents; (4) calculation of test data at the school, district, and state levels by grade and subject area; and (5) analysis of test results by school district staff and the development of a plan to remedy identified weaknesses. Student performance data are used for diagnosis of individual student strengths and weaknesses, placement of students in instructional groups or programs, guidance and counseling, identification of curricular and instructional weaknesses, instructional planning, program evaluation, and implementation of research studies. The program initially used the California Achievement Tests, but in 1983-84 adopted the Comprehensive Tests of Basic Skills. Results from 1986-87 are presented by content area, high school program type, and selected other factors. District average scores for reading, language, mathematics, and total battery are presented by grade level. Fourteen data tables and 10 graphs are included. (TJH)

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DELAWARE EDUCATIONAL ASSESSMENT PROGRAM

STATEWIDE TEST RESULTS

Summary Report

U.S. DEPARTMENT OF EDUCATION
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STATE OF DELAWARE

DEPARTMENT OF PUBLIC INSTRUCTION

I am pleased to present the summary results of the Spring 1987 Delaware Educational Assessment Program. The Delaware State Board of Education is committed to providing a quality education for each student in Delaware's public school system. Central to this commitment is the need to assess and examine the performance of the public schools and their pupils as the basis for initiating constructive change in the educational system.

Through the assessment program, information is also provided to the schools about how well Delaware public school students perform important basic skills, and to parents about how well their children perform compared to other students in the nation, the state and in their local school district.

We are pleased with the test results shown in this summary report for the school year 1986-87. The results in each content area and at each grade level tested demonstrate that the average Delaware student is performing above the national average. The continuing trend of improvement in achievement results is encouraging and serves as an indicator of the quality of our educational program. Identification of specific strengths and weaknesses in the basic skill areas will allow Delawareans to build upon existing strengths and to focus resources on identified needs. In this way, the goal of providing a quality education for each student may be reached.

William B. Keene

William B. Keene
State Superintendent
Delaware Department of Public Instruction

ACKNOWLEDGEMENTS

The success of the Delaware Educational Assessment Program is due to the cooperative efforts of many individuals in the Department of Public Instruction and in the school districts. Department of Public Instruction staff in the Planning, Research, and Evaluation Division with responsibility for the program include Thomas V. Soltys, State Supervisor of Educational Assessment; Kaye R. McCann, State Specialist of Educational Assessment; Alice L. Valdes, State Supervisor of Educational Planning; and Gail R. Truxon, Secretary. This report was compiled through the combined efforts of the above listed staff members.

Recognition is extended to District Test Coordinators for time and energy devoted to implementing the Delaware Educational Assessment Program. Those who served in this capacity during the 1986-87 administration of the program include:

DISTRICT TEST COORDINATORS

Howard Gaines, Appoquinimink
Joseph Price, Brandywine
George Benner Caesar Rodney
Edward Schaefer, Cape Henlopen
Joseph Crossen, Capital
Robert Bigelow, Christina
Richard Bulls, Colonial
Margaret Clayton, Delmar
Judith Cullen, Indian River
Arthur Gilbert, Lake Forest
William Long, Laurel
Charles Moses, Milford
Edward Barnett, NCC Voc-Tech.
William Wallace, Red Clay
Stephen Schwartz, Seaford
Wayne Barton, Smyrna
David Winski, Woodbridge

Recognition is also extended to all school coordinators and teachers/examiners in each school within the State for their extensive involvement with the Delaware Educational Assessment Program in administering the assessment instruments and using the test results in educational improvement activities.

Wilmer E. Wise

Wilmer E. Wise, State Director
Planning, Research, and Evaluation Divison

INTRODUCTION

The purpose of this report is to provide the education community and the general public with information about the Delaware Educational Assessment Program and the performance of Delaware public school students as measured by a nationally-normed standardized achievement test. This section of the report provides background information on the program and a description of the assessment instruments used to measure the academic achievement of Delaware public school students.

CHARACTERISTICS OF THE DELAWARE EDUCATIONAL ASSESSMENT PROGRAM

The Delaware Educational Assessment Program is administered by the Planning, Research, and Evaluation Division of the Department of Public Instruction. The division is responsible for managing the assessment program including annual test administration, scoring, and reporting of results. Some of the more important features of the program include:

- Statewide standardized testing in grades 1 through 8 and 11 in the content areas of reading, English, and mathematics
- Supplemental testing in Science and Social Studies in grade 11.
- Reporting of individual achievement progress to parents
- Calculation of test data at the school, district, and state levels by grade and subject area
- Analysis of test results by school district staff and the development of a plan to remedy identified weaknesses

Relative to this last feature, the State Superintendent of Public Instruction provides a detailed report to the Delaware General Assembly each year. This report which will be available in the Fall of 1987 includes individual school results, local district analyses of strengths and weaknesses, and district plans to remedy identified areas of weakness.

UTILITY OF THE DELAWARE EDUCATIONAL ASSESSMENT PROGRAM

The Delaware Educational Assessment Program strives to be responsive to the needs of students, teachers, and administrators in order to improve the quality of education received by each student. To this end, student performance data is useful for:

- diagnosing individual pupil strengths and weaknesses
- placing students in instructional groups or programs
- guidance and counseling
- identifying curricular and instructional weaknesses
- instructional planning
- evaluating programs
- conducting research studies

The Delaware Educational Assessment Program is much more than a testing program. It also undertakes activities to increase the usefulness of test data. To this end, the program:

- provides training to school personnel in the use and interpretation of test data in curriculum and instructional improvement

- supports a computerized system for school personnel for immediate access to and use of test data for program management and evaluation

- produces reports for classroom teachers organized by current homeroom or instructional group. These reports are especially useful at the beginning of the school year in analyzing the strengths and weaknesses of students entering new classrooms. In 1986-87, approximately 59 schools requested special reports for their teachers. In addition, at least 2 districts now have staff who are able to generate special reports for their teachers locally.

PROGRAM IMPLEMENTATION

For the first five years of its existence, the Delaware Educational Assessment Program administered the California Achievement Tests (CAT), normed in 1977. In the 1983-84 school year, a new test battery, the Comprehensive Tests of Basic Skills (CTBS), was administered for the first time. Norms for this test were established in the school year 1980-81. The CTBS has two parallel forms, U and V. Form U was administered in 1983-84 and 1984-85. Form V was used in 1985-86 and again this year.

In 1986-87, the CTBS battery was administered statewide during the period of March 16-27, 1987. Approximately 61,000 Delaware public school students in grades one through eight and eleven were tested in reading, language arts, and mathematics. In addition, science and social studies were tested at grade eleven.

The statewide testing program includes all regular and special education students with the exception of students in special schools or intensive learning centers. Students excepted are those with severe handicapping conditions, non-English speaking students, and those who display severe over reactions to testing situations.

Results for this year's test given <u>in this report</u> are average scores for regular and special education students combined.

While the Delaware Educational Assessment Program staff is responsible for managing test administration, scoring, and reporting, the responsibility for carrying out the program rests with all levels of the professional education community. Each school district designates a test coordinator to organize and coordinate testing within the district. In each building a professional staff member is responsible for supervising testing. In most cases, teachers serve as test examiners and proctors. All of these educators are crucial to the successful implementation of the statewide testing program.

CHARACTERISTICS OF THE COMPREHENSIVE TESTS OF BASIC SKILLS

The Comprehensive Tests of Basic Skills (CTBS) is a series of nationally-normed standardized tests published by CTB/McGraw-Hill. The CTBS was normed during the 1980-81 school year on a representative national sample of over 250,000 students. The CTBS, Form V, which was administered this year, contains from 145 to 380 test items per grade in reading, language arts, and mathematics. In grades one through three, students record their responses directly in the test booklets, while students in grades four through eight and eleven receive test booklets with separate answer sheets. The content areas assessed by the CTBS in each grade are shown in Table 1.

TABLE 1
CONTENT AREAS TESTED BY THE
COMPREHENSIVE TESTS OF BASIC SKILLS

Content Area	Grades Tested
Reading	
Word Attack	1 - 3
Reading Vocabulary	1 - 8, 11
Reading Comprehension	1 - 8, 11
Language	
Language Expression	1 - 8, 11
Language Mechanics	2 - 8, 11
Spelling	2 - 8, 11
Reference Skills	4 - 8, 11
Mathematics	
Mathematics Computation	1 - 8, 11
Mathematics Concepts and Applications	1 - 8, 11
Science	11
Social Studies	11

The Reading section of the CTBS includes Reading Vocabulary and Reading Comprehension. In this publication the Word Attack subtest for grades one through three is shown in the Reading section. However, the Word Attack average is reported separately and not included in computing the Total Reading average or in the Total Battery average. The Language section is composed of only Language Expression at grade one and Language Mechanics and Language Expression at all other grade levels. In this publication the Spelling subtest and the Reference Skills subtest are shown in the Language section. However, these subtests are reported separately and not included in computing the Total Language average score.

Mathematics Computation and Mathematics Concepts and Applications comprise the Mathematics section of the Comprehensive Tests of Basic Skills. Science and Social Studies are included at the eleventh grade level only.

REPORTING AND INTERPRETATION OF SCORES

Student responses to the CTBS test were machine scored and analyzed. Computer reports were then generated at the individual pupil, school, district, and state levels. Student, school, and district level reports were returned to Delaware educators before the end of the school year and are available over the summer months for instructional planning. Reports to parents and teachers provide performance data for individual students while reports for principals, district administrators, and state administrators provide data for groups of students.

The score used within this report is called the Normal Curve Equivalent (NCE). The NCE is a standard score scale with a national average of 50 and a range of scores from 1 to 99. This scale was selected because it enables comparisons to be made between different subtests and to the national average for all grades tested. When reading and interpreting district and state averages provided in this report, scores can be put in perspective by comparing the test score to the national average. *Average scores higher than 50 are above the national norm.*

Although only NCE scores are reported in this publication, the reports made available to parents and education personnel contain a variety of scores. For example:

Reports to Parents. These reports show percentile scores at the district, state, and national level, allowing parents to compare their child's test performance with that of a norming group. Parents also receive a graphic report which tracks their child's growth in achievement over the past several years.

School Rosters. These reports provide teachers and administrators with a variety of indicators of individual achievement. Scores included on this report are the raw score, the grade equivalent score, the normal curve equivalent, and percentile scores at the national, state, and district levels.

Evaluator's Summary Reports. These reports provide, in condensed form, an analysis of the scores obtained at the school, district, and state level for each grade tested. These reports not only provide average scores by content area, but also provide data by quartile.

Frequency Distribution Reports. Provided at the school, district, and state levels these reports give administrators an idea of the range and distribution of student achievement levels with which they must deal.

Item Analysis Reports. These reports, provided at each level of aggregation, allow administrators to analyze instructional strengths and areas of need at the group level.

1987 ASSESSMENT INFORMATION

STATE RESULTS BY CONTENT AREA

Delaware students as a whole (regular and special education combined) performed above the national average in all content areas at all grade levels as shown in Table 2. Generally, students in the primary grades obtained higher scores than those in the upper grades.

Reading. Statewide averages for Total Reading and its two component subtests (Reading Vocabulary and Reading Comprehension) were above the national average at all grades tested. At the upper grades, Reading Comprehension scores exceeded Reading Vocabulary scores, while students in the primary grades generally scored higher in Reading Vocabulary. Total Reading scores were lower than Total Language scores and Total Mathematics scores at all grades tested.

Language Arts. Statewide averages for Total Language and its component subtests of Language Mechanics and Language Expression were above the national average at all grades tested. While students in grades 2 through 6 scored higher on the Language Mechanics subtest, students in grades 7, 8 and 11 scored higher on the Language Expression subtest. Total Language scores were higher than Total Reading scores at all grades tested.

Mathematics. Statewide averages for Total Mathematics and its component subtests of Mathematics Computation and Mathematics Concepts and Applications were above the national average at all grades tested. With the exception of grades 1 and 4, scores for Mathematics Computation exceeded scores for Mathematics Concepts and Applications. In all grades tested, Total Mathematics scores were higher than Total Reading scores. Total Mathematics scores exceeded Total Language Scores at all grades except 3 and 11.

Science and Social Studies. Delaware students in grade 11 scored above the national average in both the Science and Social Studies tests. No subtest scores are available.

Summary. While average Delaware student performance was above the national average at all grade levels in all content areas, performance was generally higher in Mathematics and Language than in Reading. Higher average scores were reported in the primary grades. Generally, these trends across subtests and grades are identical to those reported in the 1985 and 1986 Statewide Test Results Reports. More detailed component objective data are shown in Tables 10-14 in the Appendix by content area. Entries labeled percent correct are averages of the percentage of students responding correctly to each of the items testing the category objective. These data are for the combination of Delaware regular and special education students and for the national sample.

TABLE 2
AVERAGE SCORES FOR DELAWARE STUDENTS, 1987

Content Areas	Grades 1	2	3	4	5	6	7	8	11
Word Attack	55.5	59.9	61.7						
Reading Vocabulary	57.5	59.3	55.2	57.7	55.3	56.1	53.4	53.4	51.0
Reading Comprehension	55.8	58.5	57.1	56.4	53.3	55.3	56.7	57.8	54.2
TOTAL READING	57.1	59.5	57.0	57.9	54.0	55.9	55.3	56.1	53.6
Spelling		64.4	64.3	57.0	55.1	56.4	57.2	58.2	61.2
Reference Skills				57.8	57.1	58.5	57.4	59.8	52.3
Language Mechanics		65.6	70.6	61.1	57.8	58.6	56.0	56.5	58.0
Language Expression	60.5	60.9	63.0	58.8	57.2	58.2	59.5	60.8	58.5
TOTAL LANGUAGE		65.2	68.0	59.6	58.6	61.0	57.5	58.2	59.3
Math Computation	56.3	68.9	63.3	61.1	64.7	64.0	61.2	60.6	57.2
Math Concepts and Applications	67.6	64.7	63.1	62.2	59.1	59.3	58.2	56.8	55.2
TOTAL MATH	62.9	70.7	64.8	61.8	63.2	64.1	59.4	59.0	56.9
TOTAL BATTERY		64.4	65.9	60.0	57.3	61.0	57.2	57.2	57.7
Science									57.9
Social Studies									59.6

NOTE: Score reported is the Normal Curve Equivalent. The national average is 50.0.

STATE RESULTS BY CURRENT HIGH SCHOOL PROGRAM

Students in grade 11 were asked to classify their current high school program as either college preparatory, vocational, or general. Over three-fourths of all grade 11 students tested provided the requested information. Of those students who responded, 55% classified their program as college preparatory, 26% classified their program as vocational, and 19% selected the general classification. Based on these responses, Table 3 provides average test scores by content area for grade 11 students in these three programs.

TABLE 3
AVERAGE SCORES FOR DELAWARE GRADE 11 STUDENTS BY PROGRAM
SPRING 1987

Content Areas	College Preparatory	Vocational	General
Total Reading	63.1	44.3	40.2
Total Language	68.1	51.9	45.6
Total Mathematics	66.6	47.1	43.2
Total Battery	67.6	48.2	42.8
Science	67.8	48.9	43.4
Social Studies	68.9	51.0	45.9

NOTE: Score is the Normal Curve Equivalent which has a national average of 50.0.

DISTRICT RESULTS

District average scores for Reading, Language, Mathematics, and Total Battery are presented by grade level in Tables 5 through 8. Table 9 shows district average scores for Science and Social Studies for grade 11 students. The comparison of average district performance to national norms and the identification of trends in performance help local school officials detect strengths and weaknesses in their district educational programs.

Differences between district test averages should be reviewed in light of important factors which interact to make each district unique. Factors to be considered in this review may include background characteristics of the students within the school, the match between curriculum objectives and the objectives assessed by the test, student mobility, dropout rate, student ability, local curriculum priorities, available financial resources, and the percentage of eligible students actually tested. Some of these factors are shown in Table 4.

TABLE 4
SOME FACTORS THAT INFLUENCE DISTRICT TEST AVERAGES
1986-87 SCHOOL YEAR

District	% Free or Reduced Lunch*	% Special Education Students**	Dropout Rate* (Grades 9-12)	Current Expenditures Per Pupil* (Excludes Special Schools)
STATE	39.1	11.3	7.6	$4,219
Appoquinimink	19.3	11.3	6.9	$3,600
Brandywine	36.5	9.8	6.4	$4,184
Caesar Rodney	38.7	8.9	8.1	$3,123
Cape Henlopen	34.7	13.1	3.9	$3,743
Capital	35.7	9.7	7.9	$3,602
Christina	48.2	13.0	9.6	$3,821
Colonial	37.3	11.2	12.5	$4,030
Delmar	26.5	6.2	4.9	$3,884
Indian River	38.4	11.7	5.4	$3,119
Lake Forest	38.5	12.5	7.1	$3,318
Laurel	36.0	7.0	9.8	$3,250
Milford	36.1	11.4	9.4	$3,133
NCC Voc-Tech.	37.7	15.0	3.2	$5,546
Red Clay Cons.	46.1	11.2	9.1	$4,304
Seaford	35.0	10.4	7.0	$3,349
Smyrna	25.4	9.7	8.4	$3,132
Woodbridge	45.3	14.9	5.6	$3,389

* Is the most current data available, 1985-86 school year
** Reflects the 1986-87 school year

TABLE 5
READING
AVERAGE NCE SCORES FOR
DELAWARE SCHOOL DISTRICTS*

District	Grades								
	1	2	3	4	5	6	7	8	11
STATE	57.1	59.6	57.0	57.9	54.0	55.9	55.3	56.1	53.6
Appoquinimink	58.1	62.0	56.4	55.8	59.1	55.6	55.7	54.4	50.3
Brandywine	61.5	62.8	60.3	61.3	56.2	58.1	57.9	57.0	59.2
Caesar Rodney	55.4	58.8	55.8	57.9	54.5	58.2	55.0	56.9	55.3
Cape Henlopen	61.8	64.0	60.0	60.5	59.4	60.6	57.7	58.4	53.8
Capital	52.0	55.3	53.8	56.9	52.7	52.6	54.1	54.0	53.4
Christina	57.1	60.3	58.1	58.2	54.2	55.7	54.6	57.4	54.1
Colonial	55.5	60.3	56.4	55.3	51.9	51.8	52.4	54.4	50.7
Delmar	-	-	-	-	-	-	57.3	57.3	51.2
Indian River	62.0	58.4	56.6	57.9	51.0	58.9	55.6	55.5	48.7
Lake Forest	58.1	61.4	52.9	57.8	53.1	54.9	54.6	54.9	51.5
Laurel	57.3	56.9	52.9	56.1	52.6	50.9	51.1	52.2	51.4
Milford	50.8	55.8	54.0	57.7	53.0	58.8	57.1	57.4	56.7
NCC Voc-Tech.	-	-	-	-	-	-	-	-	47.8
Red Clay Cons.	55.0	58.5	57.3	57.8	54.1	55.3	56.4	57.0	56.7
Seaford	58.0	55.3	55.5	56.9	53.5	53.3	53.8	54.3	49.6
Smyrna	60.5	55.7	58.2	57.3	53.5	58.8	55.0	56.0	50.2
Woodbridge	54.2	58.4	54.3	55.8	55.2	57.1	56.5	54.9	52.3

* The national average Normal Curve Equivalent score is 50.0.

TABLE 6
LANGUAGE
AVERAGE NCE SCORES FOR
DELAWARE SCHOOL DISTRICTS*

District	Grades								
	1	2	3	4	5	6	7	8	11
STATE	-	65.2	68.0	59.6	58.6	61.0	57.5	58.2	59.3
Appoquinimink	-	64.5	66.3	57.8	64.4	58.5	56.7	55.5	55.7
Brandywine	-	66.9	70.2	62.4	59.3	63.3	58.7	58.4	62.4
Caesar Rodney	-	65.2	66.0	61.2	59.0	63.4	57.8	57.7	58.7
Cape Henlopen	-	69.1	69.5	63.6	62.5	66.1	59.6	60.7	60.8
Capital	-	61.0	64.6	57.9	57.3	56.7	56.5	54.9	58.8
Christina	-	67.0	70.0	59.4	59.6	61.7	57.3	58.8	56.4
Colonial	-	65.3	67.6	56.4	55.7	55.3	54.1	56.1	58.7
Delmar	-	-	-	-	-	-	53.1	54.1	59.8
Indian River	-	66.4	70.7	63.8	58.5	67.3	59.5	60.2	59.3
Lake Forest	-	66.6	65.3	57.3	57.8	62.2	56.7	59.4	60.5
Laurel	-	63.7	65.1	56.8	61.4	58.5	54.1	57.7	58.0
Milford	-	59.8	65.3	59.6	57.2	64.7	61.1	61.9	64.1
NCC Voc-Tech.	-	-	-	-	-	-	-	-	56.0
Red Clay Cons.	-	64.8	67.2	58.3	57.8	60.0	59.0	59.7	62.9
Seaford	-	61.1	69.2	57.4	58.7	60.4	56.3	57.2	56.8
Smyrna	-	61.8	68.8	58.5	58.6	59.9	57.1	55.8	56.1
Woodbridge	-	64.3	59.2	59.7	58.3	57.8	56.1	54.2	57.1

* The national average Normal Curve Equivalent score is 50.0.

TABLE 7
MATHEMATICS
AVERAGE NCE SCORES FOR
DELAWARE SCHOOL DISTRICTS*

District	Grades								
	1	2	3	4	5	6	7	8	11
STATE	62.9	70.7	64.8	61.8	63.2	64.1	59.4	59.0	56.9
Appoquinimink	62.5	73.0	61.8	61.8	69.1	61.6	56.4	56.9	52.2
Brandywine	66.3	74.1	68.0	65.1	65.6	67.3	62.7	59.4	61.2
Caesar Rodney	60.6	71.6	65.5	60.7	61.5	67.8	60.5	62.8	59.7
Cape Henlopen	66.6	72.3	68.2	67.6	69.6	70.4	62.9	59.7	59.3
Capital	53.4	64.8	60.7	60.3	62.7	58.5	56.2	54.2	58.1
Christina	61.7	70.5	64.9	61.1	63.5	63.0	57.4	60.2	57.6
Colonial	63.7	72.1	62.7	58.9	59.4	57.9	56.7	54.0	54.2
Delmar	-	-	-	-	-	-	60.1	57.0	53.7
Indian River	65.6	68.9	64.3	62.2	63.7	73.1	62.4	59.9	52.5
Lake Forest	67.2	75.1	62.7	61.9	62.4	63.0	61.3	62.5	54.1
Laurel	63.0	70.1	62.8	62.0	63.8	63.8	55.5	55.6	51.9
Milford	59.3	72.6	63.6	63.5	67.0	68.0	66.2	66.2	63.9
NCC Voc-Tech.	-	-	-	-	-	-	-	-	51.4
Red Clay Cons.	64.5	70.7	64.7	61.1	61.3	62.3	59.2	59.8	59.4
Seaford	62.5	64.3	67.2	59.0	66.6	61.0	58.8	56.9	50.9
Smyrna	62.5	62.1	67.3	59.2	58.6	70.3	59.6	59.4	53.5
Woodbridge	60.4	75.7	63.7	65.5	64.0	62.5	58.6	55.6	51.5

* The national average Normal Curve Equivalent score is 50.0.

TABLE 8
TOTAL BATTERY
AVERAGE NCE SCORES FOR
DELAWARE SCHOOL DISTRICTS*

District	Grades								
	1	2	3	4	5	6	7	8	11
STATE		64.4	65.9	60.0	57.3	61.0	57.2	57.2	57.7
Appoquinimink	-	65.6	63.6	58.4	63.1	59.3	56.2	54.6	52.9
Brandywine	-	67.5	69.4	63.6	59.2	63.8	59.7	57.9	62.4
Caesar Rodney	-	64.1	64.5	60.2	57.2	64.0	57.2	57.7	58.4
Cape Henlopen	-	68.2	68.9	63.9	62.6	66.3	59.7	59.1	58.6
Capital	-	59.1	61.7	58.6	56.0	56.2	55.5	53.8	57.4
Christina	-	65.0	67.0	59.7	57.9	60.9	56.5	58.4	57.2
Colonial	-	65.4	64.7	57.0	54.3	55.1	53.8	54.5	55.5
Delmar	-	-	-	-	-	-	55.7	55.1	56.3
Indian River	-	64.1	66.7	61.9	56.0	66.7	59.0	58.2	54.6
Lake Forest	-	68.0	62.2	59.0	56.3	60.4	56.9	58.6	56.2
Laurel	-	62.3	62.5	58.1	58.5	57.9	52.8	54.2	55.0
Milford	-	61.4	62.8	60.2	57.0	64.7	61.3	60.7	62.4
NCC Voc-Tech.	-	-	-	-	-	-	-	-	52.3
Red Clay Cons.	-	63.9	65.9	59.4	56.8	60.1	58.4	58.6	61.3
Seaford	-	59.1	66.7	58.4	58.0	58.8	55.7	55.4	53.9
Smyrna	-	58.6	67.5	58.6	56.1	64.5	57.6	57.2	53.7
Woodbridge	-	66.8	61.2	61.1	58.0	59.7	56.6	54.2	55.1

* The national average Normal Curve Equivalent score is 50.0.

TABLE 9
SCIENCE AND SOCIAL STUDIES
AVERAGE NCE SCORES FOR
DELAWARE SCHOOL DISTRICTS*

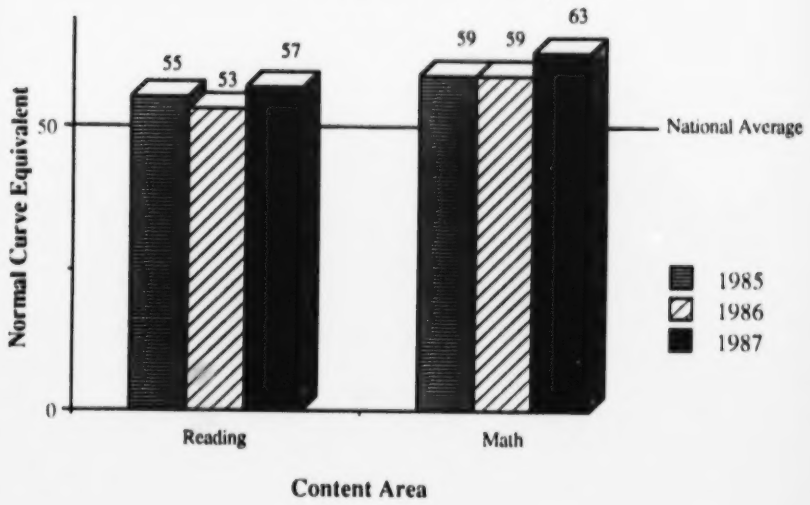
District	Science 11	Social Studies 11
STATE	57.9	59.6
Appoquinimink	56.1	57.7
Brandywine	62.1	64.6
Caesar Rodney	60.8	61.4
Cape Henlopen	57.8	61.1
Capital	57.8	58.8
Christina	58.9	60.7
Colonial	55.7	55.5
Delmar	58.0	64.9
Indian River	54.0	55.6
Lake Forest	57.8	60.7
Laurel	53.9	58.7
Milford	59.3	62.4
NCC Voc-Tech.	53.5	54.2
Red Clay Cons.	60.5	60.4
Seaford	52.0	56.6
Smyrna	53.2	55.6
Woodbridge	55.0	60.2

* The national average Normal Curve Equivalent score is 50.0.

THREE YEAR COMPARISON OF STATE RESULTS

One of the important goals of the state assessment program is to monitor year-to-year achievement progress. The following graphs by grade compare average test scores for 1985, 1986, and 1987. The score used is the Normal Curve Equivalent (NCE) score rounded to the nearest whole number. The national average NCE score of 50 is indicated on the graphs.

GRADE 1



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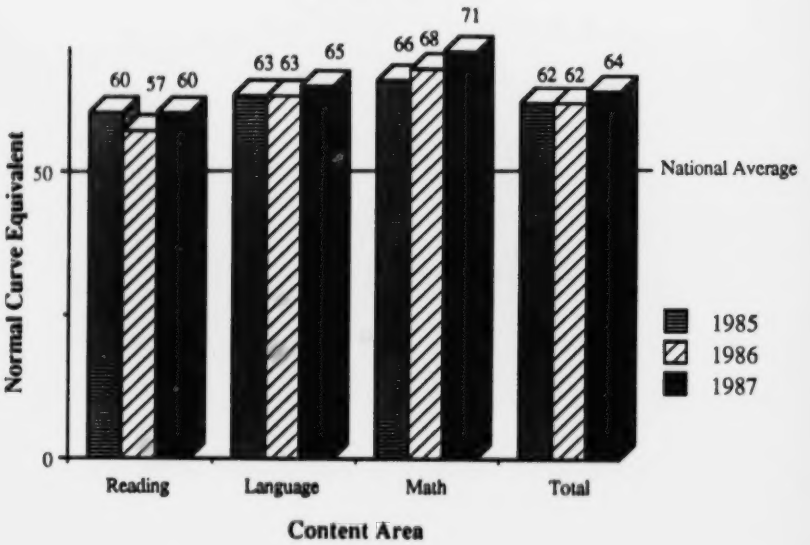

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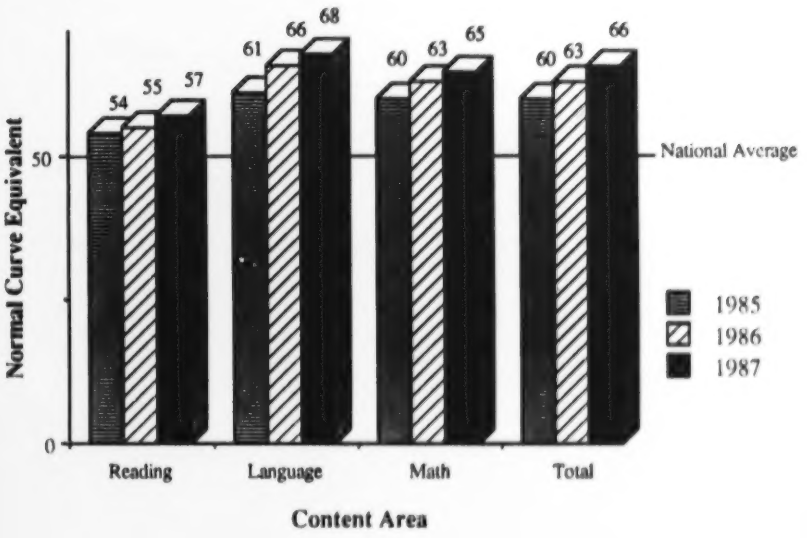

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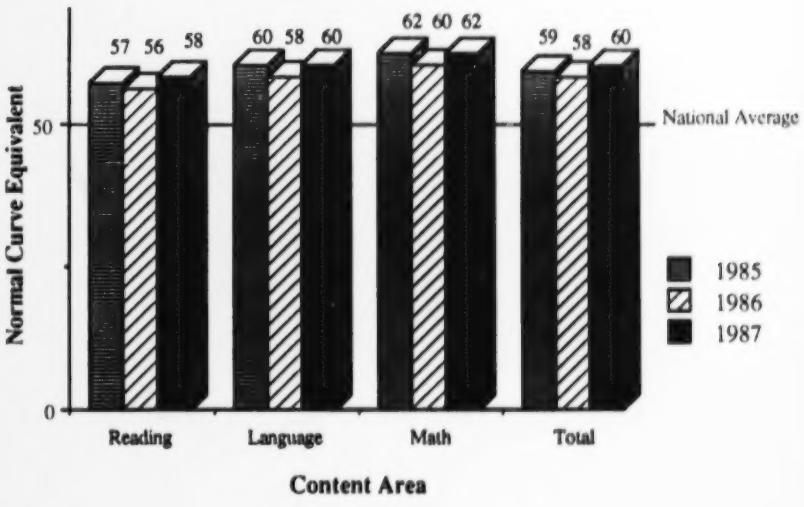

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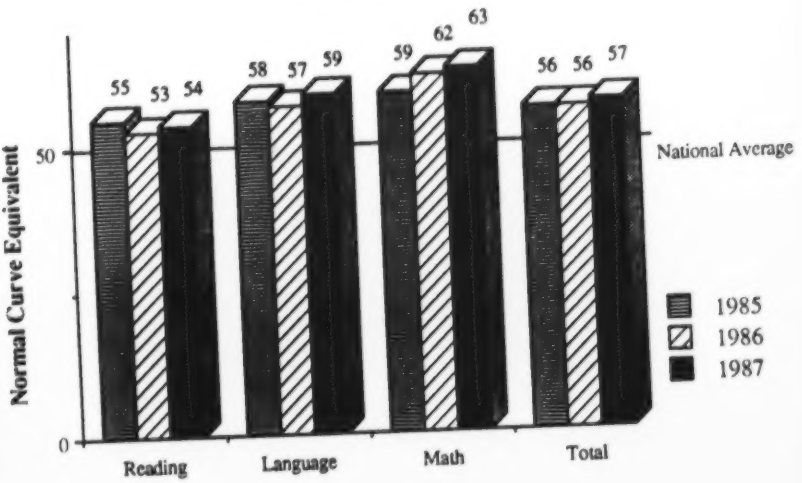

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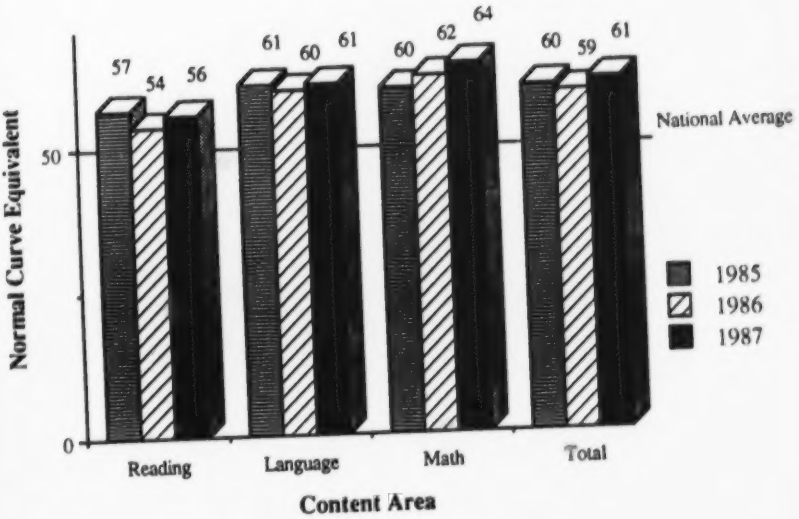

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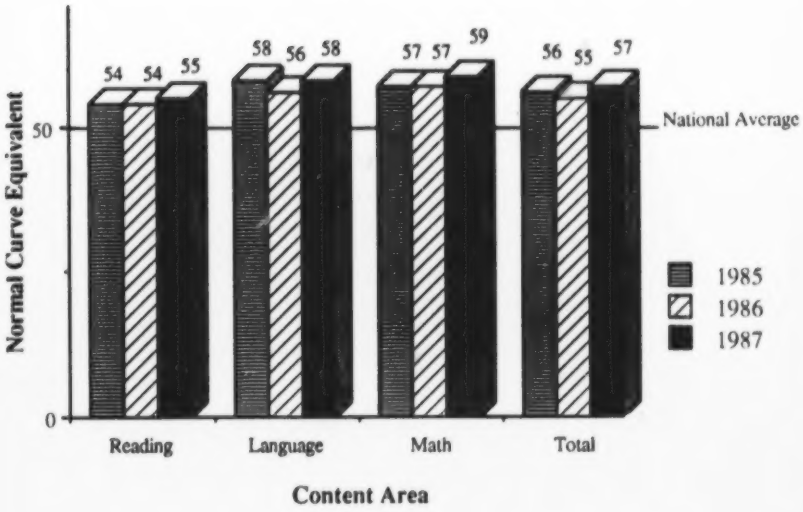

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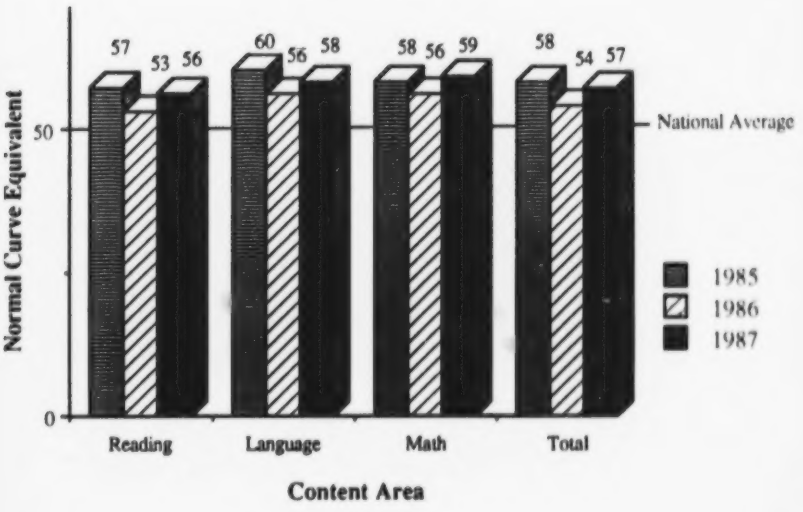

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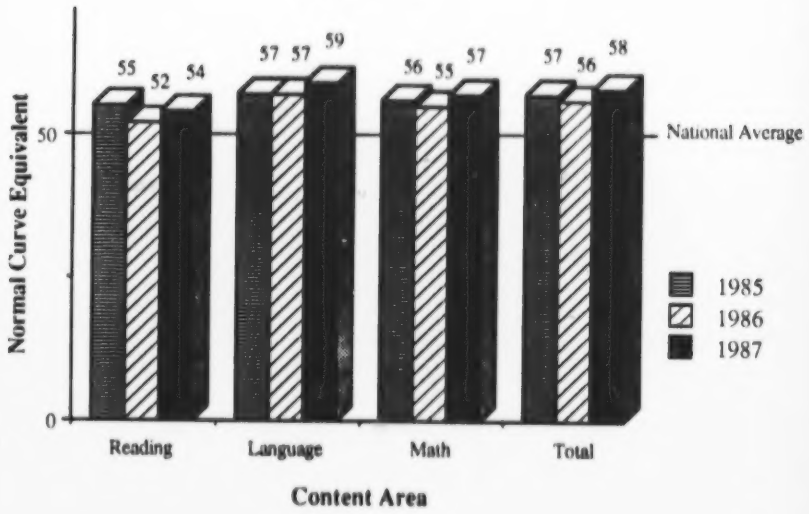
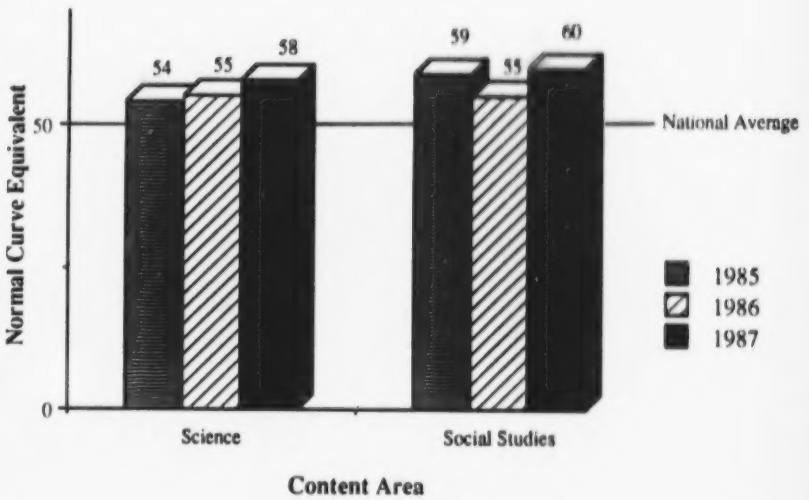

Normal Curve Equivalent
50
0
55
52
54
57
57
59
56
55
57
57
56
58
National Average
1985
1986
1987
Reading
Language
Math
Total
Content Area


Normal Curve Equivalent
50
0
54
55
58
59
55
60
National Average
1985
1986
1987
Science
Social Studies
Content Area

APPENDIX

TABLE 10
PERCENT OF CORRECT RESPONSES BY ITEM
DELAWARE/NATIONAL SAMPLE
READING
SPRING 1987

Category / Objective	Grades 1 DE/NAT	2 DE/NAT	3 DE/NAT	4 DE/NAT	5 DE/NAT	6 DE/NAT	7 DE/NAT	8 DE/NAT	11 DE/NAT
WORD ATTACK									
Initial Consonant	91/82								
Final Consonant	84/69								
Cluster/Digraph Words	88/75	97/93							
Sight Words	86/77	92/83							
Medial Vowels	68/58	79/65	78/59						
Diphthongs/Variant Vowels		62/46	65/50						
Syllables/Roots/Affixes		83/64	89/66						
Compounds/Components		86/71	83/70						
Contractions			78/61						
READING VOCABULARY									
Oral Categories/Words	69/55								
Oral Definitions/Words	82/69								
Same Meaning	69/57	80/64	74/66	75/63	68/60	77/70	66/59	74/66	68/66
Unfamiliar Words in Context	79/64	83/71	88/79	81/72	81/71	86/80	73/61	80/68	76/73
Multimeaning Words			79/66	78/68	62/54	75/65	66/57	72/64	67/58
Missing Words in Context				68/63	64/62	77/71	66/64	75/71	71/72
Meaning of Affixes				79/68	78/66	83/74	70/69	75/75	75/74
READING COMPREHENSION									
Sentence Meaning	86/73								
Passage Details	52/46	81/71	78/73	75/62	65/62	74/70	70/62	76/68	69/67
Character Analysis	62/54	73/59	75/68	79/68	74/71	80/78	73/63	78/71	87/85
Main Idea		71/58	72/64	80/68	73/66	80/73	70/59	76/66	78/75
Generalizations		65/50	81/72	72/60	76/67	80/70	66/59	74/68	80/78
Written Forms			85/55	78/61	71/64	79/71	65/53	73/61	70/63
Writing Techiques				79/71	54/50	65/58	68/64	76/71	70/65

* This table shows the percent of Delaware students responding correctly to an item compared to the percent of students in a national sample responding correctly to the same item.

TABLE 11
PERCENT OF CORRECT RESPONSES BY ITEM
DELAWARE/NATIONAL SAMPLE
LANGUAGE
SPRING 1987

Category / Objective	Grades 1 DE/NAT	2 DE/NAT	3 DE/NAT	4 DE/NAT	5 DE/NAT	6 DE/NAT	7 DE/NAT	8 DE/NAT	11 DE/NAT
LANGUAGE MECHANICS									
CAPITALIZATION									
Pronoun I/Nouns/ Adjectives		82/59	84/61	80/70	79/64	84/69	63/50	69/55	78/68
Beginning Words/ Titles		91/73	93/74	73/52	57/41	62/48	61/56	67/62	65/61
PUNCTUATION									
Period/Question Mark/ Exclamation Point/ Comma		82/67	87/61	73/63	68/60	76/66	70/60	76/65	70/65
Quotation Marks				69/50	72/61	78/69	84/71	89/75	
Colon/Semicolon									61/46
PUNCTUATION AND CAPITALIZATION									
Editing Skills				77/63	74/63	80/69	60/55	66/61	74/65
LANGUAGE EXPRESSION									
USAGE									
Nouns	86/77	93/84	87/58	56/62					
Pronouns		93/81	93/70	92/83	94/88	95/91	65/58	66/61	47/39
Verbs	68/56	81/70	92/80	87/76	75/69	79/73	79/72	82/76	76/72
Adjectives/Adverbs	78/66	85/71	89/65	89/75	76/71	83/77	83/71	87/76	91/84
SENTENCE STRUCTURE									
Sentence Patterns	86/72	94/80							
Sentence Formation	69/55	87/72	81/61	65/46					
Sentence Recognition				79/64	82/68	86/74	82/65	86/70	72/60
PARAGRAPH ORGANIZATION									
Sentence Combining				82/70	80/72	86/77	69/58	76/64	80/70
Topic Sentence				70/56	63/53	70/60	65/50	73/56	80/65
Sequence				77/63	76/67	82/73	72/62	78/67	75/69
Clarity					70/60	77/68	73/62	78/67	76/66
Types of Writing Style							68/57	77/63	71/63

* This table shows the percent of Delaware students responding correctly to an item compared to the percent of students in a national sample responding correctly to the same item.

TABLE 12
PERCENT OF CORRECT RESPONSES BY ITEM
DELAWARE/NATIONAL SAMPLE
MATHEMATICS
SPRING 1987

Category / Objective	Grades 1 DE/NAT	2 DE/NAT	3 DE/NAT	4 DE/NAT	5 DE/NAT	6 DE/NAT	7 DE/NAT	8 DE/NAT	11 DE/NAT
MATHEMATICS COMPUTATION									
Add Whole Numbers	79/69	90/75	81/85	75/66					
Add Dec Nals/Fractions				73/62	70/54	70/60	69/50	70/64	77/70
Subtract Whole Numbers	84/77	91/77	75/59	70/58					
Subtract Decimals/Frac.				60/51	74/60	68/65	66/48	76/59	81/76
Multiply Whole Numbers			79/64	78/65	76/60	66/76			
Multiply Decimals/Frac.					57/40	70/62	61/43	73/55	68/58
Divide Whole Numbers			79/59	78/62	75/60	64/75			
Divide Dec Nals/Frac.							65/51	75/61	69/66
Integers							30/30	55/45	71/51
Algebraic Expressions									65/61
Exponents or Percents									62/50
MATHEMATICS CONCEPTS AND APPLICATIONS									
Numeration	86/70	79/66	80/68	76/64	72/58	81/69	63/52	74/63	78/75
Number Sentences			77/64	78/65	68/58	76/70	71/66	77/75	70/60
Number Theory			76/64	80/70	70/60	80/69	69/55	79/67	72/65
Problem Solving	77/58	83/62	81/63	80/70	68/59	77/71	66/55	74/64	66/64
Measurement		81/61	82/68	83/67	71/60	78/70	59/54	67/64	53/45
Geometry		88/69	83/65	76/63	63/53	72/62	73/63	80/72	69/63
Measurement/Geometry	81/66								

* This table shows the percent of Delaware students responding correctly to an item compared to the percent of students in a national sample responding correctly to the same item.

TABLE 13
PERCENT OF CORRECT RESPONSES BY ITEM
DELAWARE/NATIONAL SAMPLE
SCIENCE
SPRING 1987

Category / Objective	Grade 11 DE/NAT
Botany	63/55
Zoology	80/74
Ecology	78/68
Physics	68/61
Chemistry	74/63
Land/Sea/Space	69/66

TABLE 14
PERCENT OF CORRECT RESPONSES BY ITEM
DELAWARE/NATIONAL SAMPLE
SOCIAL STUDIES
SPRING 1987

Category / Objective	Grade 11 DE/NAT
Geography	71/71
Economics	71/62
History	79/68
Political Science	77/65
Sociology	66/56
Interdisciplinary	72/60

* This table shows the percent of Delaware students responding correctly to an item compared to the percent of students in a national sample responding correctly to the same item.

The complete report of the statewide testing program titled **DELAWARE EDUCATIONAL ASSESSMENT PROGRAM 1987 REPORT TO THE LEGISLATURE** will be available in November, 1987. It contains school, district and state results as well as analysis of strengths and weaknesses for each Delaware school district. To obtain a copy, contact the Planning, Research, and Evaluation Division of the Delaware State Department of Public Instruction, Townsend Building, Dover, DE 19903.